ALTO-SHAAM®

# Combitherm®

## Combination Oven / Steamer

# ES ELECTRIC COMBITOUCH®

## 7•14ES

## 7.14ESi

## WITH AUTOMATIC LIQUID CLEANING AND GREASE COLLECTION

24•7 Your Service Hotline 1-800-558-8744

# • INSTALLATION


**W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 USA**

PHONE: 262.251.3800 • 800.558.8744 USA/CANADA FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY

WWW.ALTO-SHAAM.COM



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Always refer to the wire diagram(s) included with the unit for most current version.

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## DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. ***See Transportation Damage and Claims section located in this manual.***

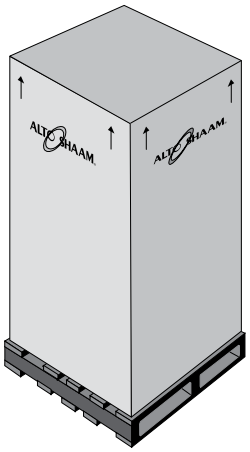
This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to ensure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

**NOTE:** All claims for warranty must include the full model number and serial number of the unit.

## UNPACKING



1. Carefully remove the appliance from the carton or crate.

   **NOTE:** Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance.

   DO NOT DISCARD THIS MANUAL.
   This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. ***Additional manuals are available from the Alto-Shaam Tech Team Service Department.***

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

**CAUTION**

**TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.**

**THE INFORMATION CONTAINED IN THIS MANUAL IS IMPORTANT FOR THE PROPER INSTALLATION OF THIS OVEN. PLEASE READ CAREFULLY AND RETAIN FOR FUTURE REFERENCE.**

**IMPROPER CONNECTION OF THIS APPLIANCE WILL NULLIFY ALL WARRANTIES.**

**LES INFORMATIONS CONTENUES DANS CE MANUEL SONT IMPORTANTES POUR L'INSTALLATION L'UTILISATION ET L'ENTRETIEND DE CE FOUR. S'IL VOUS PLAIT LISEZ-LE TRES ATTENTIVEMENT ET CONSERVEZ-LE.**

**LA NON-APPLICATION DE CES CONSIGNES ANNULE TOUTES GARANTIES.**

## SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

**DANGER**

**Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.**

**WARNING**

**Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.**

**CAUTION**

**Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.**

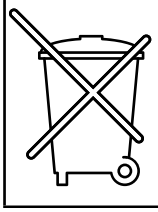
**CAUTION**

**Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.**

**NOTE:** Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

**NOTE**



**For equipment delivered for use in any location regulated by the following directive:**

**DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.**

**CAUTION**

**WHEN WELDING ANY STAINLESS STEEL COMPONENTS ON THIS APPLIANCE, THE ELECTRONIC CONTROL BOARDS MUST BE ISOLATED FROM THE APPLIANCE.**

# INSTALLATION

## SITE INSTALLATION

**DANGER**

**IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.**

**READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

**DANGER**

**AVERTISSEMENT : UNE INSTALLATION, UN AJUSTEMENT, UNE ALTÉRATION, UN SERVICE OU UN ENTRETIEN NON CONFORME AUX NORMES PEUT CAUSER DES DOMMAGES À LA PROPRIÉTÉ, DES BLESSURES OU LA MORT.**

**LIRE ATTENTIVEMENT LES DIRECTIVES D'OPÉRATION ET D'ENTRETIEN AVANT DE FAIRE L'INSTALLATION, OU L'ENTRETIEN DE CET ÉQUIPEMENT.**

**CAUTION**

**TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.**

**⚠ DANGER**

**DO NOT store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.**

## SITE INSTALLATION

### INSTALLATION CODES & STANDARDS

The following codes and standards are required for installation of this oven: AIR SUPPLY, ELECTRICAL CONNECTIONS, WATER CONNECTIONS, AND WASTE WATER DISCHARGE.

**NOTE:**

Where automatically operated appliances are vented through a ventilating hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the equipment to operate only when the damper is open to a position to properly vent the appliance and when the power means of exhaust is in operation.

*IN ACCORDANCE WITH NFPA 54*

*COMMONWEALTH OF MASSACHUSETTS ONLY.*

### VENTILATION REQUIREMENTS

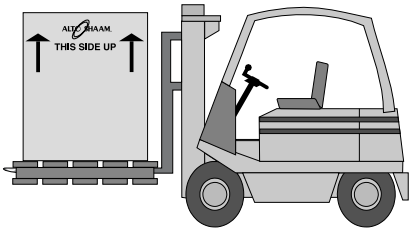
A steam ventilation hood is mandatory for the operation of the oven. The ventilation hood must be installed in accordance with local building codes for the steam exhaust and must protrude 12-inches to 20-inches (300 to 500mm) over the front side of the oven. A grease filter must be located in the protruding area of the hood. Grease filters should be thoroughly cleaned on a regular basis following manufacturer's instruction. Ventilation hoods must ensure an adequate amount of incoming air during operation and must be operated whenever the combination oven/steamer is used in order to avoid the accumulation of condensation in the hood area.

# INSTALLATION

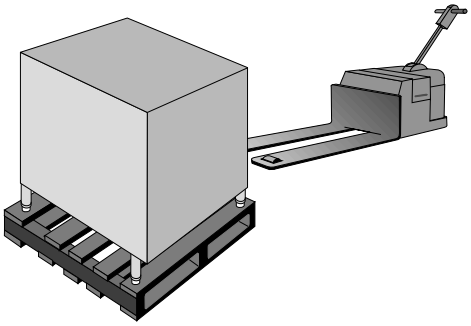
## SITE INSTALLATION

**CAUTION**

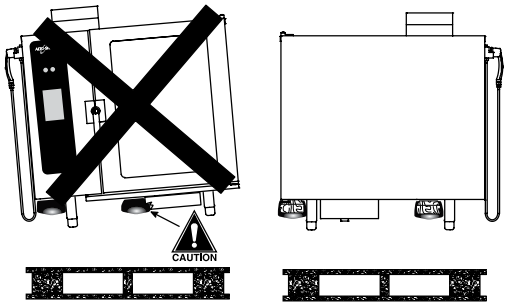
THE APPLIANCE MUST REMAIN ON THE PALLET WHILE BEING MOVED TO THE INSTALLATION SITE BY FORK LIFT OR PALLET LIFT TRUCK.




**NOTE:** Note dimensions required for doorways and aisles for access of the oven and pallet to the installation site. Transport the oven in an upright and level position only. Do not tilt the oven.



**NOTE:** To avoid equipment damage, observe attention label on oven for area to avoid with lifting fork.




### POSITIONING ON SITE

Stand the oven in a level position. Use the adjustable feet to overcome an uneven floor and ensure that the unit is level.

It is strongly recommended that table top models be mounted on a factory supplied stand or a stand that is stable, open, and level. Recommended height is 23-inches (584mm).

Adjust the height of floor models for smooth access of the trolley or cart. When positioning the oven, observe the minimum space allocation requirements shown.

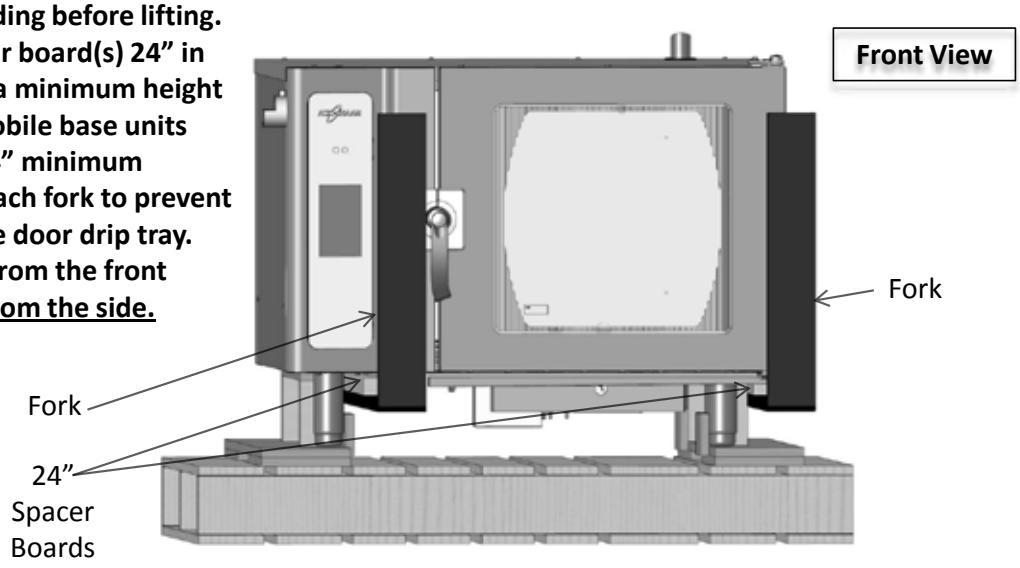
To insure proper operation, the installation of this oven must be completed by qualified technicians in accordance with the instructions provided in this manual. Failure to follow the instructions provided may result in damage to the oven, building, or cause personal injury to personnel.

| MINIMUM CLEARANCE REQUIREMENTS | |
|---|---|
| LEFT SIDE | 6" (152mm) MINIMUM<br>18" (457mm) SERVICE ACCESS RECOMMENDED<br>20" (508mm) FROM HEAT PRODUCING EQUIPMENT |
| RIGHT SIDE | 4" (102mm) |
| BACK | 4" (102mm) FOR PLUMBING |
| TOP | 20" (508mm) FOR AIR MOVEMENT |

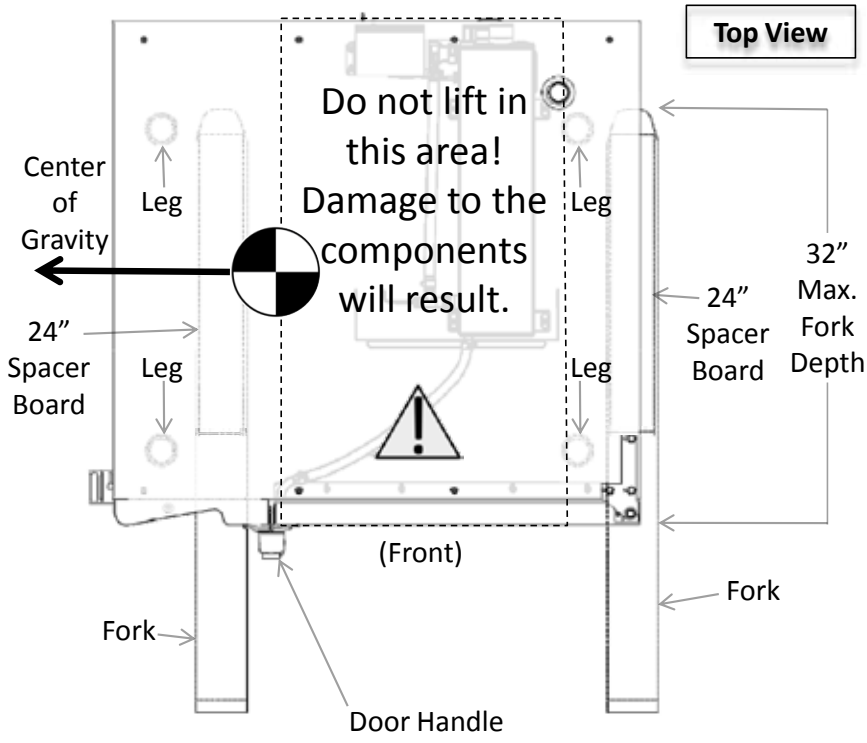
**NOTE: Additional clearance is needed for service access. A minimum distance of 18-inches is strongly recommended. If adequate service clearance is not provided, it will be necessary to disconnect the gas, water, and drain to move the oven with a fork lift for service access. Charges in connection with inadequate service access is not covered under warranty.**

# Lifting Instructions

**Remove banding before lifting. Place a spacer board(s) 24” in length, with a minimum height of 1-1/2” (mobile base units require 2-1/4” minimum height), on each fork to prevent damaging the door drip tray. Lift the unit from the front only, <u>never from the side.</u>**




**Adjust the forks so that they do not damage any of the components under the unit. The left fork should be located between the left legs and the door handle. The right fork should be located as close to the right legs as possible. Lift the unit high enough to remove the wooden pallet. Have a second person hold the unit from shifting. <u>When moving the unit, drive slowly, keep it low to the ground, and use extreme caution.</u>**

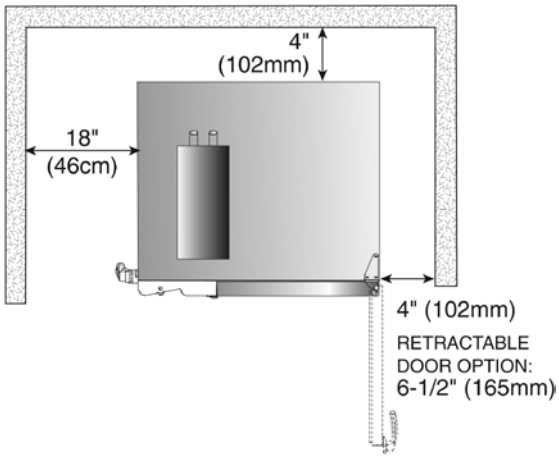



**DEPTH OF FORKS IS CRITICAL FOR UNITS EQUIPPED WITH GREASE COLLECTION TO AVOID DAMAGING THE PUMP**

# INSTALLATION

## SITE INSTALLATION

### POSITIONING REQUIREMENTS




❑ In order to ensure proper ventilation, a minimum distance of at least 6-inches (152mm) must be kept from the control panels side (left) of the oven and any adjoining surfaces.

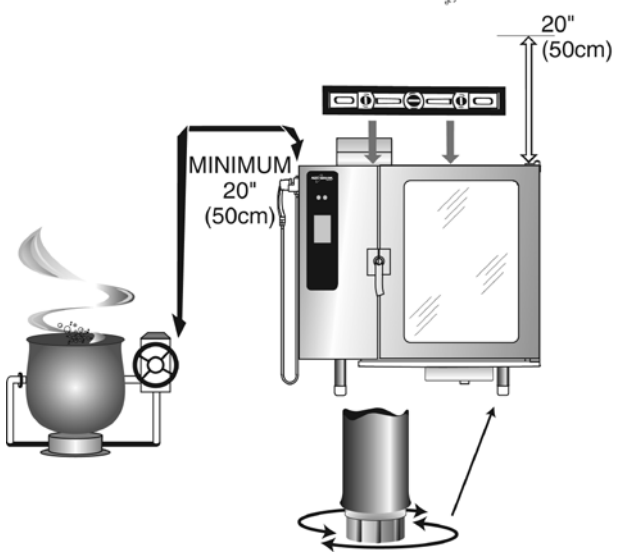
**NOTE: Additional clearance is needed for service access. A minimum distance of 18-inches is strongly recommended. If adequate service clearance is not provided, it will be necessary to disconnect the gas, water, and drain to move the oven with a fork lift for service access. Charges in connection with inadequate service access is not covered under warranty.**

❑ Allow a minimum of 4-inches (102mm) from the right side of the oven to allow the door to open to at least a 90° angle. Fully opened, the door will extend up to a 225° angle If the oven is furnished with the retractable door option, allow a minimum clearance of 6-1/2 inches (165mm).

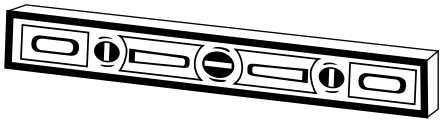
❑ Allow a minimum clearance of 4-inches (102mm) from the back of the oven for plumbing connections.

❑ Allow a 20-inch (500mm) clearance at the top of the oven for free air movement and for the steam vent(s) located at the top.

❑ Do not install the oven adjacent to heat producing equipment such as fryers, broilers, etc. Heat from such appliances may cause damage to the controls of the Combitherm. Minimum clearance recommended: 20-inches (500mm)

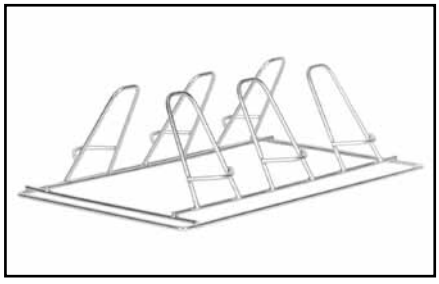



Place the Combitherm oven on a stable, non-combustible level horizontal surface. For countertop models, the oven stand must be level. Level from front-to-back and side-to-side by means of the adjustable legs. In addition, the overall height of the oven should be positioned so the operating controls and shelves may be conveniently reached from the front.



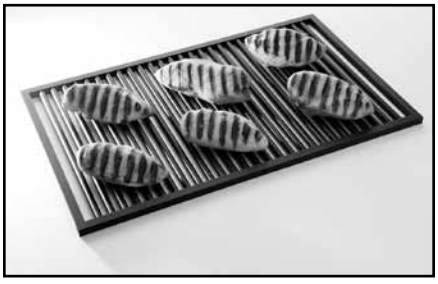
# INSTALLATION

| ACCESSORIES | |
|---|---|
| ☐ **COMBIGUARD™ BWS BLENDED WATER SYSTEM** (INCLUDES 50 GALLON TANK, 1 MEMBRANE & 3 FILTERS) | FI-28727 |
| ☐ **COMBIGUARD™ BWS REPLACEMENT FILTER CARTRIDGE AMS-QT** | FI-29316 |
| ☐ **COMBIGUARD™ BWS REPLACEMENT FILTER CARTRIDGE SCLX2-Q** | FI-29317 |
| ☐ **COMBIGUARD™ BWS REPLACEMENT PREFILTER FILTER CARTRIDGE CTO-Q** | FI-29318 |
| ☐ **COMBIGUARD™ 10 TRIPLE-GUARD WATER FILTRATION SYSTEM** (FOR SINGLE UNITS, INCLUDES 1 CARTRIDGE) | FI-23014 |
| ☐ **COMBIGUARD™ 10 TRIPLE-GUARD REPLACEMENT FILTER** (FOR SINGLE UNITS) | FI-26356 |
| ☐ **COMBIGUARD™ 20 TRIPLE-GUARD WATER FILTRATION SYSTEM** (FOR STACKED UNITS, INCLUDES 1 CARTRIDGE) | FI-28728 |
| ☐ **COMBIGUARD™ 20 TRIPLE-GUARD REPLACEMENT FILTER** (FOR STACKED UNITS) | FI-28744 |
| ☐ **COMBITHERM CLEANING LIQUID** — SPECIALLY FORMULATED FOR COMBITHERM OVENS<br>➥ FOUR (4) CONTAINERS/CASE, 1 GALLON EACH [SPECIAL HANDLING REQUIRED] | CE-26013 |
| ☐ **EXTENDED ONE-YEAR WARRANTY** | CONTACT FACTORY |
| ☐ **FRY BASKET,** 12" x 20" (325mm x 530mm) | BS-26730 |
| ☐ **GRILLING GRATE,** 12" x 20" (325mm x 530mm) | SH-26731 |
| ☐ **POULTRY GREASE COLLECTION CONTAINER**: 15" x 9-3/4" x 9-3/4" (381mm x 248mm x 248mm) | 5014846 |
| ☐ **POULTRY ROASTING RACK** 6 CHICKEN CAPACITY, SELF-TRUSSING — FITS IN SIDE RACKS: 4 RACKS PER OVEN | 5014438 |
| ☐ **SCALE FREE**™ (CITRUS BASED, NON-CORROSIVE DELIMING PRODUCT) | CE-27889 |
| ☐ **SERVICE START-UP CHECK** AVAILABLE THROUGH AN ALTO-SHAAM FASTEAM CENTER | SPECIFY AS REQUIRED |
| ☐ **SHELF, STAINLESS STEEL WIRE** | SH-22584 |
| ☐ **STAND, STAINLESS STEEL (H X W X D):**<br>STATIONARY 37-3/4" X 35-7/16" X 28" (957mm x 900mm x 710mm) | 5006170 |



Chicken Roasting Rack 5014438

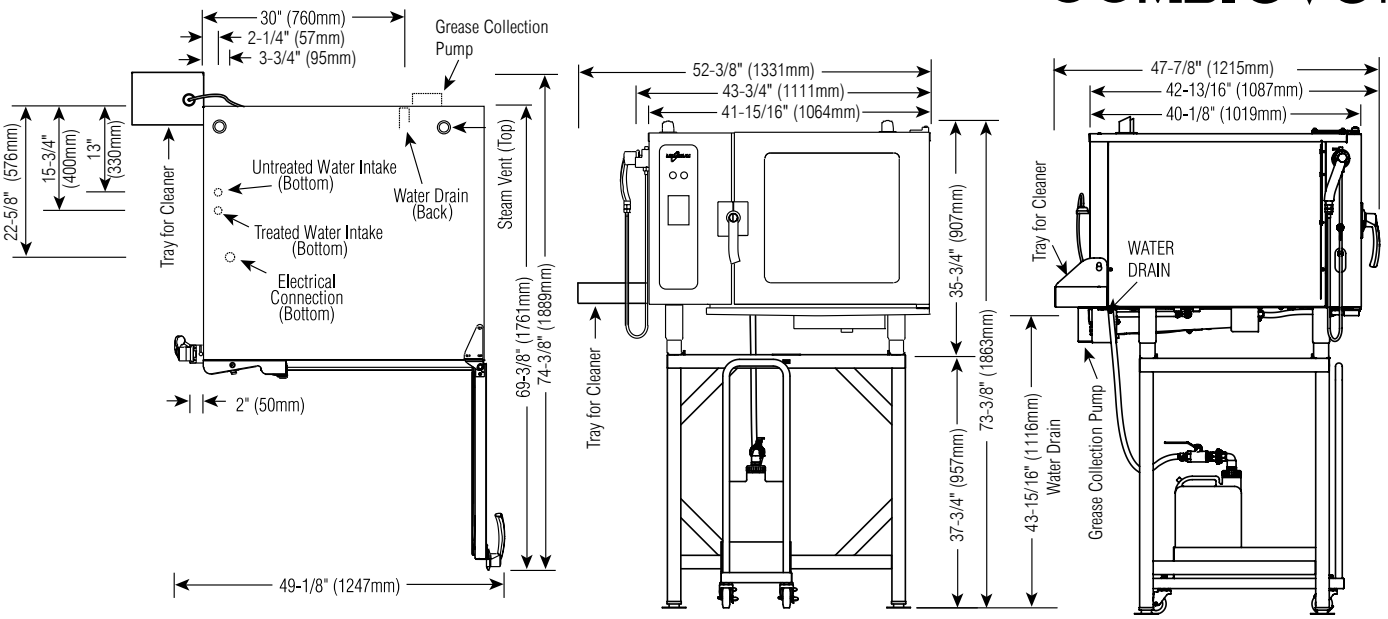
Fry Basket BS-26730



Grilling Grate SH-26731

ALTO-SHAAM®

# 7•14ESi COMBITHERM® COMBIoven




## INSTALLATION REQUIREMENTS

Oven must be installed level.
Hood installation is required.
Water supply shut off valve and back flow preventer when required by local code.

## DIMENSIONS: H x W x D

**EXTERIOR:**
73-3/8" x 52-3/8" x 47-7/8" (1863mm x 1331mm x 1215mm)

**INTERIOR:**
20-5/16" x 23-1/2" x 28-7/8" (515mm x 596mm x 733mm)

## WATER REQUIREMENTS

**TWO (2) COLD WATER INLETS - DRINKING QUALITY**

**ONE (1) TREATED WATER INLET:** 3/4" NPT* * Can manifold off of one 3/4" line.
**ONE (1) UNTREATED WATER INLET:** 3/4" NPT*
**LINE PRESSURE:** 30 to 90 psi 2.8 to 6.2 bar
**WATER DRAIN:** 1-1/2" CONNECTION WITH A 2" MINIMUM AIR GAP INSTALLED AS CLOSE TO THE OVEN AS POSSIBLE

## CLEARANCE REQUIREMENTS

**LEFT** 6" (152mm) **RECOMMENDED SERVICE ACCESS: 18" (457mm)**
20" (508mm) **FROM HEAT PRODUCING EQUIPMENT**
**RIGHT** 4" (102mm) **TOP:** 20" (508mm) FOR AIR MOVEMENT
**BACK** 4" (102mm) **BOTTOM:** 5-1/8" (130mm) FOR LEGS

## WATER QUALITY MINIMUM STANDARDS

USING A WATER SUPPLY NOT MEETING ALTO-SHAAM'S MINIMUM WATER QUALITY STANDARDS WILL VOID THIS WARRANTY.
It is the responsibility of the purchaser to ensure that incoming water supply is compliant with the specifications listed through adequate treatment measures. Installation of the CombiGuard™ Water Filtration System is recommended, but this system may not address all water quality issues present.

| Contaminant | Inlet Water Requirements (untreated water) |
|---|---|
| Free Chlorine | Less than 0.1 ppm (mg/L) |
| Hardness | Less than 3 gpg (52 ppm) |
| Chloride | Less than 30 ppm (mg/L) |
| pH | 7.0 to 8.5 |
| Alkalinity | Less than 50 ppm (mg/L) |
| Silica | Less than 12 ppm (mg/L) |
| Total Dissolved Solids (tds) | Less than 60 ppm |

## ELECTRICAL [DEDICATED CIRCUIT REQUIRED FOR EACH OVEN]

| VOLTAGE | PHASE | CYCLE/HZ | AWG | AMPS | kW |
|---|---|---|---|---|---|
| at 208 | 3 | 60 | Bare End, 3 Wire plus ground, AWG 6 | 40.3/ph | 14.5 |
| at 240 | | | | 46.0/ph | 19.0 |

## WEIGHT

| | | |
|---|---|---|
| NET | 405 lb | (184 kg) |
| SHIP | 545 lb | (247 kg) |

CRATE DIMENSIONS: (L x W x H)
56" x 45" x 51"
(1422 x 1143 x 1295mm)

## CAPACITY

| | | |
|---|---|---|
| FULL-SIZE PANS: | 20" x 12" x 2-1/2" | Fourteen (14) |
| GN 1/1: | 530 x 325 x 65mm | Fourteen (14) |
| GN 2/1: | 650 x 530 x 65mm | Seven (7) |
| FULL-SIZE SHEET PANS:* | 18" x 26" x 1" | Seven (7) |
| ON WIRE SHELVES ONLY | | |

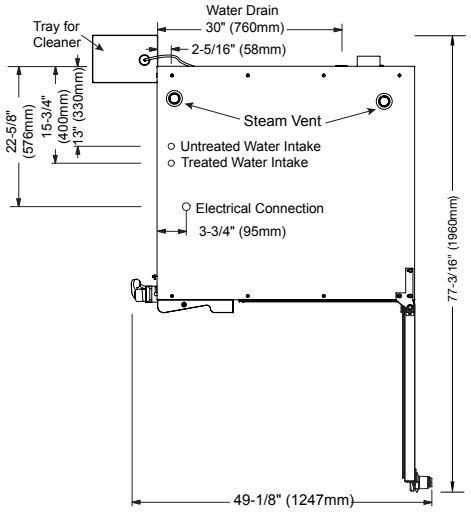
168 lb (76 kg) MAXIMUM

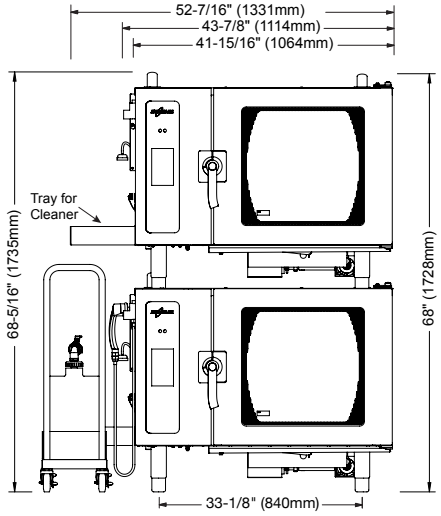
VOLUME MAXIMUM: 105 quarts (133 liters)

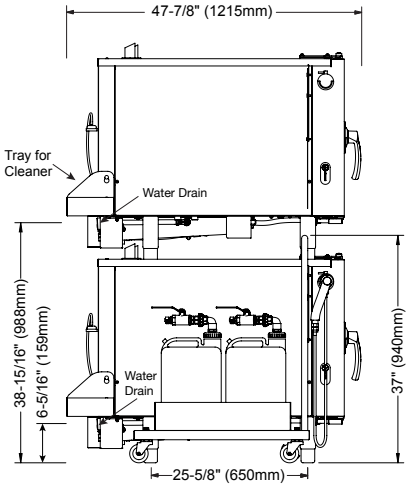
*ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

# 7•14ESi OVER 7•14ESi

## COMBITHERM® COMBIoven




**INSTALLATION REQUIREMENTS**

Oven must be installed level.
Hood installation is required.
Water supply shut off valve and back flow preventer when required by local code.

**DIMENSIONS:** H x W x D

**EXTERIOR:**
68" x 49-7/16" x 45-1/4" (1727mm x 1255mm x 1150mm)

**INTERIOR:**
20-5/16" x 23-1/2" x 28-7/8" (515mm x 596mm x 733mm)

**WATER REQUIREMENTS**

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| Contaminant | Inlet Water Requirements (untreated water) |
|---|---|
| Free Chlorine | Less than 0.1 ppm (mg/L) |
| Hardness | Less than 3 gpg (52 ppm) |
| Chloride | Less than 30 ppm (mg/L) |
| pH | 7.0 to 8.5 |
| Alkalinity | Less than 50 ppm (mg/L) |
| Silica | Less than 12 ppm (mg/L) |
| Total Dissolved Solids (tds) | Less than 60 ppm |

**CLEARANCE REQUIREMENTS**

**LEFT** 6" (152mm) **RECOMMENDED SERVICE ACCESS: 18" (457mm)**
20" (508mm) **FROM HEAT PRODUCING EQUIPMENT**
**RIGHT** 4" (102mm) **TOP:** 20" (508mm) FOR AIR MOVEMENT
**BACK** 4" (102mm) **BOTTOM:** 5-1/8" (130mm) FOR LEGS

**ELECTRICAL (EACH OVEN)** [DEDICATED CIRCUIT REQUIRED FOR EACH OVEN]

| VOLTAGE | PHASE | CYCLE/HZ | AWG | AMPS | kW |
|---|---|---|---|---|---|
| at 208 | 3 | 60 | Bare End, 3 Wire plus ground, AWG 6 | 40.3/ph | 14.5 |
| at 240 | | | | 46.0/ph | 19.0 |

**WEIGHT**

| | | |
|---|---|---|
| NET | 850 lb (est.) | (386 kg) |
| SHIP | 1,297 lb | (588 kg) |

CRATE DIMENSIONS: (L x W x H)
56" x 56" x 84"
(1422 x 1422 x 2134mm)

**CAPACITY (EACH OVEN)**

| | | |
|---|---|---|
| FULL-SIZE PANS: | 20" x 12" x 2-1/2" | Fourteen (14) |
| GN 1/1: | 530 x 325 x 65mm | Fourteen (14) |
| GN 2/1: | 650 x 530 x 65mm | Seven (7) |
| FULL-SIZE SHEET PANS:* | 18" x 26" x 1" | Seven (7) |
| ON WIRE SHELVES ONLY | | |

168 lb (76 kg) MAXIMUM

VOLUME MAXIMUM: 105 quarts (133 liters)

*ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

# INSTALLATION

## ELECTRICAL CONNECTION

**DANGER**

**ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.**

**DANGER**

**APPLIANCES WITH NO CORD PROVIDED BY FACTORY MUST BE EQUIPPED WITH A CORD OF SUFFICIENT LENGTH TO PERMIT THE APPLIANCE TO BE MOVED FOR CLEANING.**

**ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.**

**Hard wired models:**

Hard wired models must be equipped with a country certified external allpole disconnection switch with sufficient contact separation.

If a power cord is used for the connection of the product an oil resistant cord like H05RN or H07RN or equivalent must be used.

**DANGER**

**To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/ NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.**

**DANGER**

**IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.**

**READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

**NOTE**: CE approved appliances must be connected to an electrical circuit that is protected by an external GFCI outlet.

1. *An electrical wiring diagram is located behind the control panel on the left side of the oven.* This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram.
2. Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific oven model. For supply connections, locate the wire size posted on the label located on the electrical control box cover, behind the service panel.
3. When connecting to a Delta-B (wild leg) on a 3-phase system, the wild leg must be connected to line 3.
4. Before operating the oven, check all cable connections in the electrical connection area for tightness since connections can loosen during transport.

**NOTE: After both water and electrical connections have been completed, operate the oven in any cooking mode for a period of 15 minutes and recheck the main power connections at the terminal block to make certain they remain tight. [The need to check motor rotation no longer applies to the Combitouch® model line.]**

**380-415V:**

**For CE approved units:** To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.

# INSTALLATION

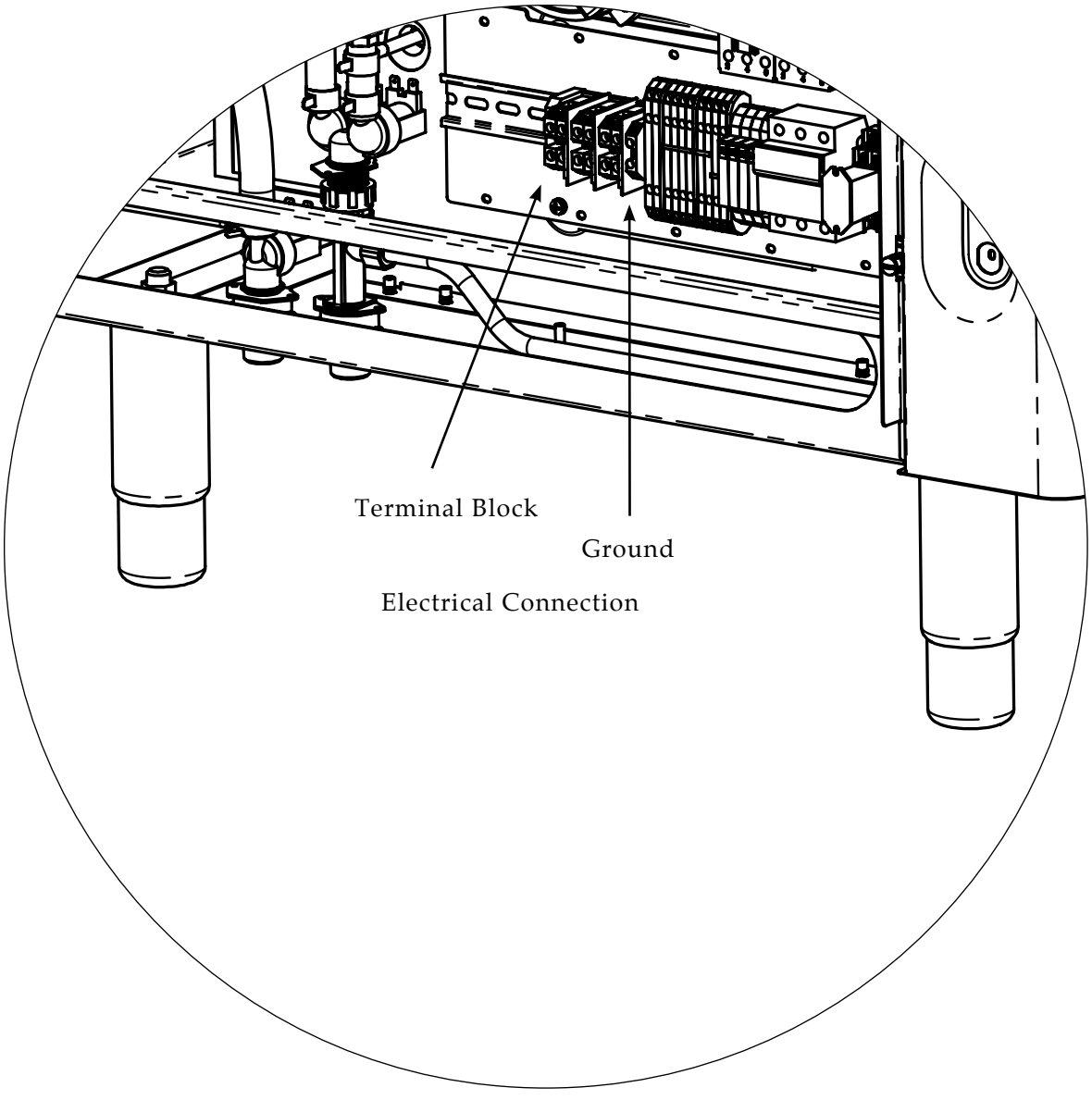
## ELECTRICAL CONNECTION

**DANGER**

**ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.**

**DANGER**

**To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/ NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.**



# INSTALLATION

## WATER QUALITY REQUIREMENT

### USE A DRINKING QUALITY, COLD WATER SUPPLY ONLY

Water quality is of critical importance when installing steam producing equipment of any kind, particularly ***high temperature*** steam producing equipment. Water that is perfectly safe to drink is composed of chemical characteristics that directly affect the metal surfaces of steam producing equipment. These chemical characteristics differ greatly from region to region throughout the U.S. and the world. ***Varying combinations of pH; alkalinity; hardness; chlorides; total dissolved solids; and other chemical characteristics, when subjected to high temperatures, will cause water to have a tendency to either scale or corrode.***

Alto-Shaam has consulted with people who understand the properties of water in order to provide water quality standards that meet the broadest possible range of acceptable water quality requirements to help protect your investment.

We strongly urge water testing to ascertain the water quality on site prior to the installation of any steam producing equipment. Since water quality is an important issue, Alto-Shaam is committed to provide as much information as possible to help protect the investment made in this equipment.

A CombiGuard™ Water Filtration System can be purchased as an option for installation on the Combitherm oven. This filter, when properly installed, maintained, and combined with the required levels of steam generating equipment maintenance, will help lessen the affect water has on metal surfaces. It will not, however, provide complete protection against all water damage from region to region.

Due to the complexity of water chemistry, it is important to understand that water quality plays a significant role in the longevity of steam producing equipment. Water quality and required maintenance of steam generating equipment is the direct responsibility of the owner/operator. Damage incurred as a direct result of poor water quality and/or surfaces affected by water quality is also the responsibility of the owner/operator. Damage due to water quality that does not meet the minimum standards shown below is not covered under the Alto-Shaam Combitherm warranty.

Alto-Shaam will continue our efforts to provide viable solutions to ease the impact of water quality as it relates to steam generating equipment.

***ALTO-SHAAM COMBITHERM WATER QUALITY MINIMUM STANDARDS***

| CONTAMINANT | INLET WATER REQUIREMENTS (UNTREATED WATER) |
|---|---|
| Free Chlorine | Less than 0.1 ppm (mg\L) |
| Hardness | Less than 3 gpg (52 ppm) |
| Chloride | Less than 30 ppm (mg\L) |
| pH | 7.0 to 8.5 |
| Alkalinity | Less than 50 ppm (mg\L) |
| Silica | Less than 12 ppm (mg\L) |
| Total Dissolved Solids (tds) | Less than 60 ppm |

**⚠ WARNING**

**TO PREVENT WATER PIPES OR HOSES FROM BURSTING, INCOMING WATER SUPPLY SHOULD BE TURNED OFF WHEN THE APPLIANCE IS NOT IN USE.**

**⚠ WARNING**

**WATER SUPPLY MUST BE OPEN WHEN CLEANING PROGRAM IS ACTIVATED.**

**VERIFY WATER SUPPLY BEFORE STARTING CLEANING PROGRAM.**

# INSTALLATION

## WATER CONNECTIONS

| WATER REQUIREMENTS | |
|---|---|
| **TWO (2) COLD WATER INLETS - DRINKING QUALITY** | |
| **ONE (1) TREATED WATER INLET:** | 3/4" NPT* |
| **ONE (1) UNTREATED WATER INLET:** | 3/4" NPT* |
| **LINE PRESSURE:** | 30 to 90 psi |
| | 2.8 to 6.2 bar |
| *** Can manifold off of one 3/4" line** | |
| REFER TO PUBLISHED SPECIFIC WATER REQUIREMENTS | |
| **WATER DRAIN:** 1-1/2" CONNECTION WITH AIR GAP | |

Flush the water line at the installation site.

Install water intake filters (provided) [see Figure 1] before connecting the oven to the water supply.

A hose connector is supplied for flexible hose connection to the **COLD** water source.

**Backflow Prevention —** The equipment must be installed with adequate backflow protection to comply with applicable federal, state, and local codes.

***PIPE SEALING TAPE (TEFLON®) MUST BE USED AT ALL CONNECTION POINTS.*** The use of a pipe sealing compound is not recommended.

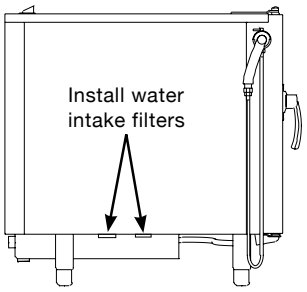
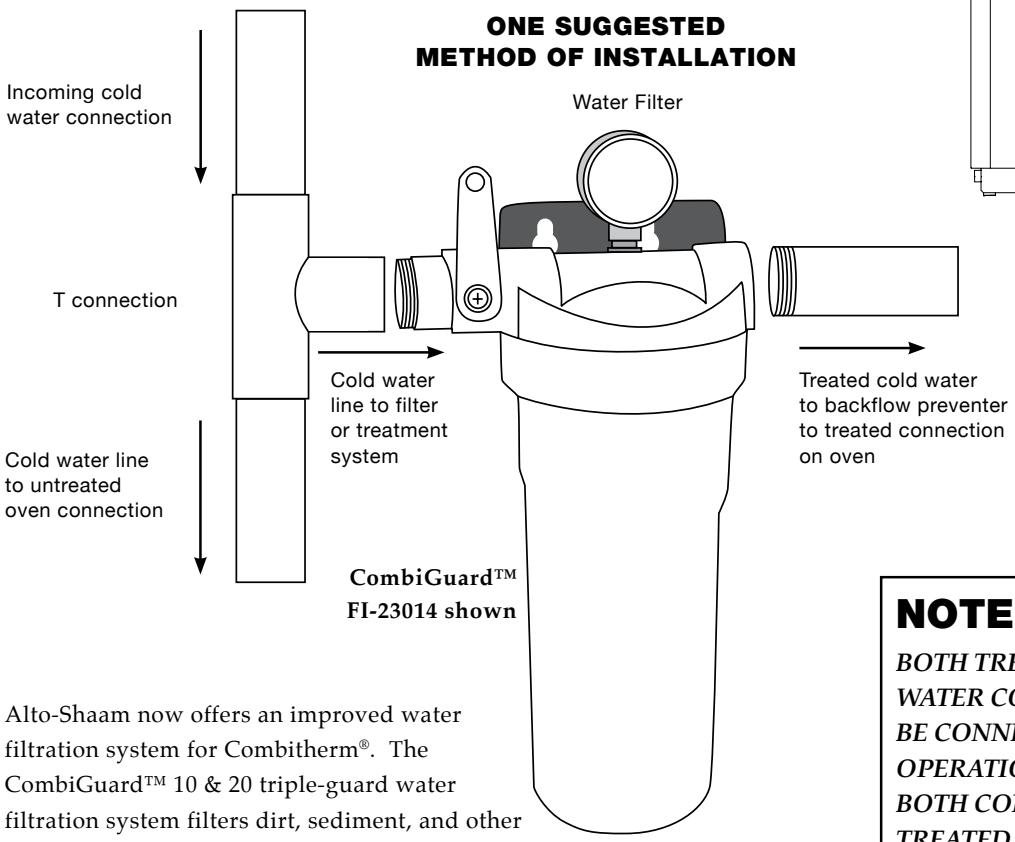



Figure 1

**ONE SUGGESTED METHOD OF INSTALLATION**


Water Filter
Incoming cold water connection
T connection
Cold water line to untreated oven connection
Cold water line to filter or treatment system
Treated cold water to backflow preventer to treated connection on oven

**CombiGuard™ FI-23014 shown**

Alto-Shaam now offers an improved water filtration system for Combitherm®. The CombiGuard™ 10 & 20 triple-guard water filtration system filters dirt, sediment, and other debris as small as 1/2 micron. This system also significantly reduces chlorine content to protect against corrosive chorine compounds. CombiGuard improves equipment efficiency, reduces service requirements and extends the life of the Combi oven. After installation, confirm that water quality standards specified in this manual are being met. Filtration systems include one filter cartridge. Additional cartridges can be purchased separately. Refer to an earlier page for additional ordering information.

The CombiGuard™ BWS Blended Water System utilizes reverse osmosis to remove more than 97% of the total dissolved solids from water which can be precisely blended with filtered and treated water.

## NOTE:

***BOTH TREATED AND UNTREATED WATER CONNECTIONS MUST BE CONNECTED FOR PROPER OPERATION OF THE OVEN. BOTH CONNECTIONS CAN BE TREATED WATER, BUT SHOULD NEVER BE CONNECTED TO ONLY UNTREATED WATER.***

***UNIONS OR FLEXIBLE LINES SHOULD BE USED TO ALLOW FOR OVEN MOVEMENT WHEN BEING SERVICED OR CLEANING IS NEEDED.***

# INSTALLATION

## WATER VALVE

**SHUT-OFF VALVE SHOWN IN THE OFF POSITION**

## NOTE:

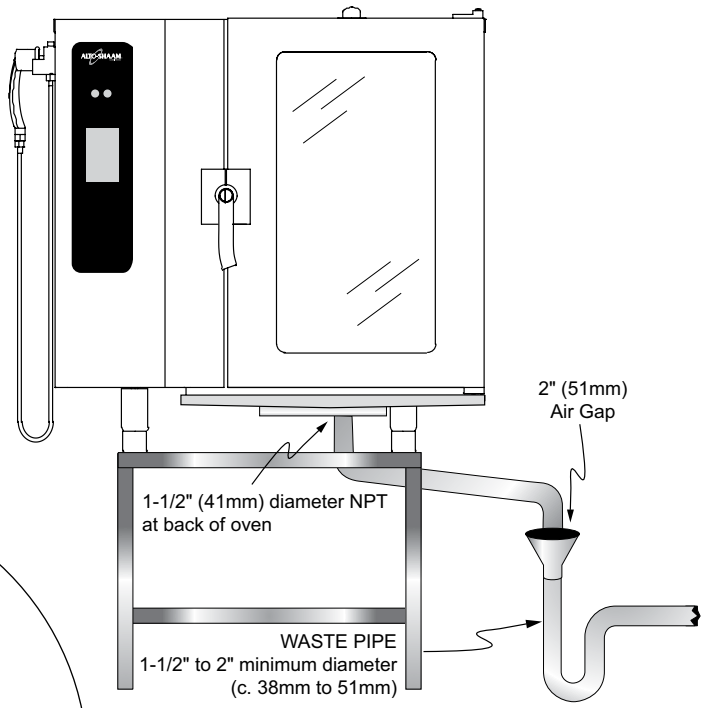
***THE SHUT-OFF VALVE MUST BE IN THE OPEN POSITION WHEN THE OVEN IS BEING USED.***

## WATER DRAINAGE

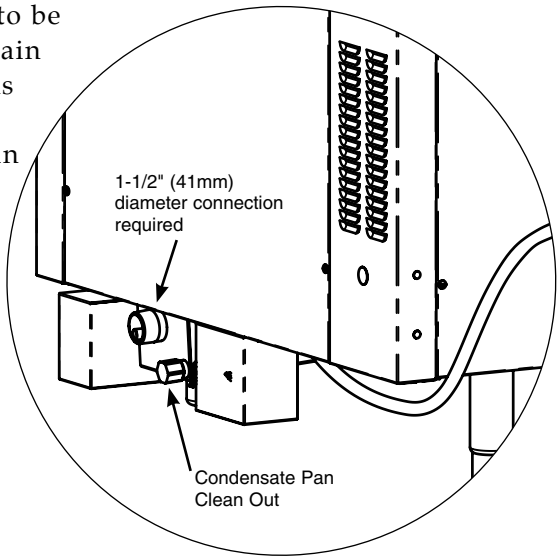
The oven must discharge through an indirect waste pipe by means of an air gap. The drain fitting is supplied with a 1-1/2-inch (41mm) NPT thread.

A union is required. Install a 1-1/2-inch (41mm) diameter connection, drain line and clamp into place. The drain line must always be a positive gradient away from the Combitherm oven and not more than 12-inches (305mm) before an air gap.

**NOTE:** In the U.S.A., this equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. [BOCA], and the Food Service Sanitation Manual of the Food & Drug Administration [FDA].

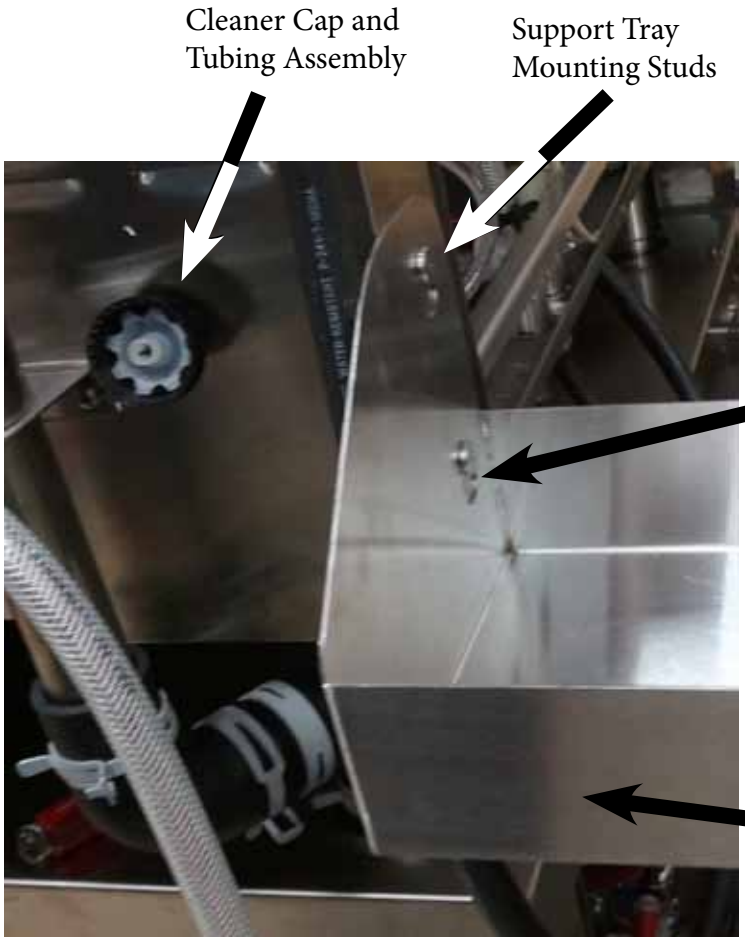



If several units are to be connected to one drain pipe, the dimensions of the pipe must be sufficient to allow an unobstructed water drain system.

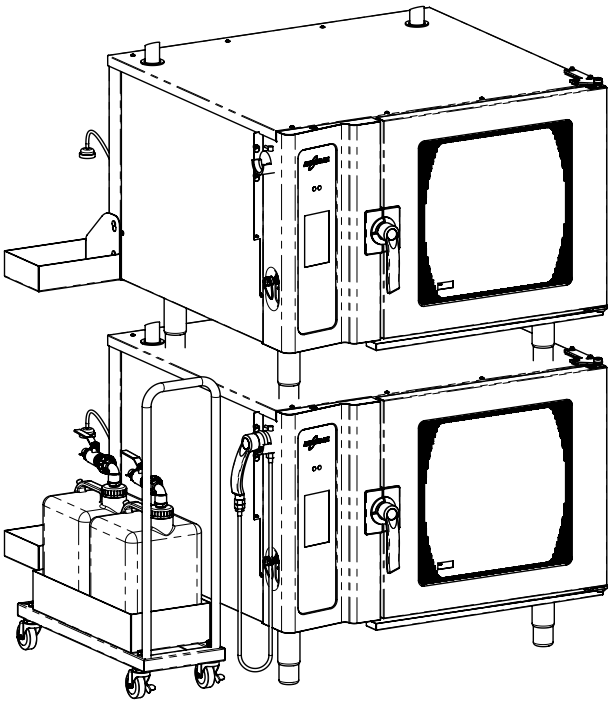


# INSTALLATION

## LIQUID CLEANER HOOK-UP



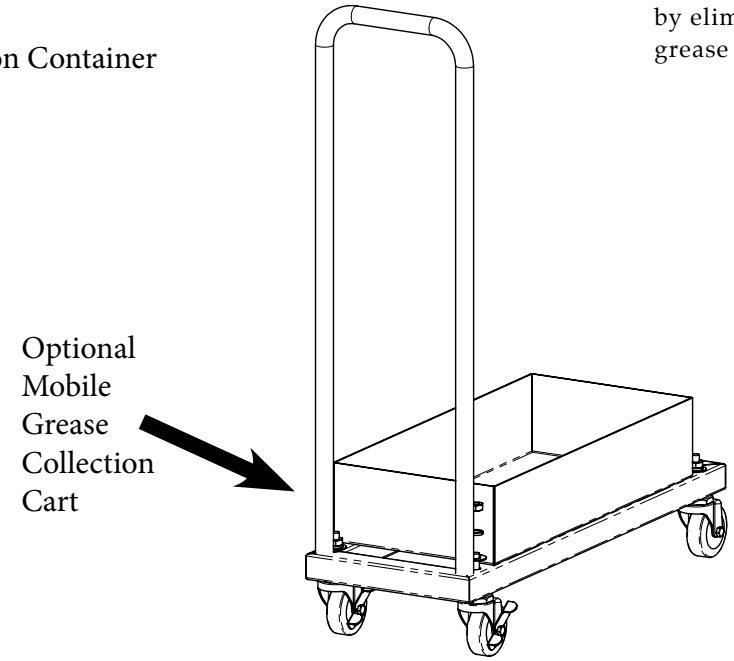

- Removable, cleaner support tray does mount on the left exterior wall of the oven. Slide slotted openings on the tray over the mounting studs.
- Support tray holds a 2-1/2-gallon bottle and measures 10-1/2" x 7-3/4" (267mm x 194mm).
- Place liquid oven cleaner bottle inside tray.
- ***Wearing protective rubber gloves and eye wear,*** remove cap from liquid oven cleaner bottle. Pull out the Cleaner Cap and Tubing Assembly from the back of the unit screw on to liquid oven cleaner bottle.
- Combitherm liquid oven cleaner jugs are quickly and easily replaced.
- Combitherm liquid oven cleaner is automatically pumped through the system, saving labor and providing greater employee safety by eliminating the need to handle caustic cleaning liquids each day.



# INSTALLATION

## GREASE COLLECTION HOOK-UP (IF EQUIPPED WITH THIS FEATURE)

- Grease Collection Hose Assembly is attached to the oven in the back.
- Place Grease Collection Containers inside the tray of the Mobile Grease Collection Cart. Roll into place next to the oven.
- Remove cap from container. Pull out the Grease Collection Hose Assembly from the back of the unit.
- Screw on to collection container until snug.
- Turn ball valve handle to the **ON** position.
- Automatic Grease Collection System is electronically activated during the chicken cooking process [PATENT PENDING]. It is designed to save labor and provide greater employee safety by eliminating the need to handle hot grease in shallow pans.



## ERROR CODES

***This section is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel.*** If your Alto-Shaam® unit is not operating properly, check the following before calling your Authorized Alto-Shaam Service Agent:

☛ Check that unit is receiving power. Circuit breaker turned on?

***Do not attempt to repair or service the oven beyond this point. Contact Alto-Shaam for the nearest authorized service agent. Repairs made by any other service agents without prior authorization by Alto-Shaam will void the warranty on the unit.***

When the oven malfunctions, an error code will appear in the display.

**PRESS THE START ICON TO ACKNOWLEDGE THE ERROR.**

The icons that begin to flash represent operational modes that are still usable.
When the oven fault is corrected, the Combitherm will return to normal operation.

| Error Code | Error Call Out in Display | Description of Error | Possible Cause |
|---|---|---|---|
| **E01** | Low Water Boiler | Low water level in boiler | — Water supply is shut off.<br>— Low water pressure.<br>— Generator drain cap missing or loose.<br>— Generator drain pump is not sealing.<br>— Generator drain pump elbow leaking.<br>— Faulty or scaled water level probe.<br>— Faulty or plugged dual solenoid valve assembly.<br>— Wiring or connection issue.<br>— No output to dual solenoid from relay board.<br>— Relay board, high voltage is not operating. |
| **E02** | Control Temperature High | Relay board surface temperature too high | — Wiring or connection issue.<br>— Cooling fan on Relay board assembly is not operating.<br>— Cooling Fan on display board is not operating.<br>— Main Cooling fan is not operating.<br>— Cooling Fan on motor drive is not operating.<br>— Unit is less than 20” from a heat producing source on its left hand side. |
| **E03** | Fan Motor Error | Fan motor does not work | — Exhaust hood is not operating properly.<br>— Check LED flashes on the Motor Control.<br>— **See Motor Control Error Code list**.<br>— Connection Issue on Hall Effect sensor.<br>— Fan whel is not operating.<br>— Hall sensor does not detect motor rotation. |
| **E04** | Fan Motor 2 Error | Lower fan motor on 20•20 does not work | — Exhaust hood is not operating properly.<br>— Check LED flashes on the Motor Control.<br>— **See Motor Control Error Code list**.<br>— Connection Issue on Hall Effect sensor.<br>— Fan wheel is not operating.<br>— Hall sensor does not detect motor rotation. |
| **E11** | Convection Temperature High | Excess oven temperature | Convection Mode & Combi Mode:<br>— Convection Oven contactor(s) stuck closed.<br>— N6 Oven Cavity Temperature probe defective.<br>— N6 Cavity Probe connection problem.<br>— Relay board, high voltage is not operating.<br>— Wiring or connection issue.<br>Combi Mode Only:<br>— Insufficient water supply into oven for steam production. |

CONTINUED ON NEXT PAGE

## ERROR CODES

| Error Code | Error Call Out in Display | Description of Error | Possible Cause |
|---|---|---|---|
| **E13** | Boiler Temperature High | Boiler temperature overheats | — Scale build up inside steam generator.<br>— Scale build up on water level probe.<br>— B4 Probe connection problem.<br>— B4 probe faulty. |
| **E15** | Condensor Temperature High | Excess condensor temperature | — Untreated water supply line is shut off.<br>— Untreated water supply line is connected to warm water.<br>— B3 probe connection problem.<br>— B3 probe is faulty.<br>— Single solenoid valve Y2 obstructed or faulty.<br>— Wiring or connection problem.<br>— Relay board, high voltage is not operating. |
| **E20** | HACCP Only - B11 Core Temperature Probe Single Point Fault<br><br>Error E20 is not shown in display. Instead a probe sign with "?" is shown as popup window. In case the customer cooks in time mode during first step and during second step switches to probe mode but has no probe in place, the error E20 will be shown in the error code list and HACCP list. | Single point core temperature probe defect or disconnected. | — Clean Probe Receptacle Pins with sand paper.<br>— B11 Single Point Core Temperature probe with quick connect, defective.<br>— B11 Single Point Core Temperature probe wires with quick connect, disconnected.<br>— B11 Single Point Core Temperature probe receptacle, defective.<br>— B11 Single Point Core Temperature probe receptacle wires disconnected. |
| **E21** | N6 Cavity Probe Fault | Cavity temperature probe defect or disconnected | — N6 Oven Cavity Temperature probe defective.<br>— N6 Oven Cavity Temperature connection problem. |
| **E22** | B10 Core Temperature Probe Multipoint Fault | Multipoint core temperature probe defect or disconnected | — B10 Multipoint Core Temperature probe defective.<br>— B10 Multipoint Core Temperature probe connection problem. |
| **E23** | B4 Boiler Probe Fault | Boiler temperature probe defect or disconnected | — B4 Boiler temperature probe defective.<br>— B4 probe wires connection problem. |
| **E24** | B5 Bypass Probe Fault | Bypass steam temperature probe defect or disconnected | — B5 Bypass steam temperature probe defective.<br>— B5 Bypass steam temperature connection problem. |
| **E25** | B3 Condensor Probe Fault | Condensor water temperature probe defect or disconnected | — B3 Condensor temperature probe defective.<br>— B3 Condensor probe connection problem. |
| **E26** | N8 Boiler Safety Temperature Probe Fault | Steam generator heating element protection probe defect or disconnected | — N8 Boiler temperature probe defective.<br>— N8 probe connection problem. |
| **E27** | Boiler Element Temperature High | Excess steam generator safety probe | — Scale build up inside steam generator.<br>— Scale build up on water level probe.<br>— Water level probe connection failure.<br>— N8 boiler temperature probe defective.<br>— N8 probe connection problem.<br>— Steam element contactor(s) stuck closed.<br>— Wiring or connection problem. |

CONTINUED ON NEXT PAGE

## ERROR CODES

| Error Code | Error Call Out in Display | Description of Error | Possible Cause |
|---|---|---|---|
| **E34** | Steam Generator Drain Pump Fault | Water level in steam generator does not drop during cleaning program | — Scale build up inside the steam generator drain pump.<br>— Scale build up inside the steam generator affecting water level probes.<br>— Generator drain pump is faulty.<br>— Connection issue at drain pump.<br>— No output to pump from relay board. |
| **E36** | Steam Temperature High | Oven cavity temperature is too high when operating in a steam mode or cleaning program | — Water supply is shut off.<br>— Low water pressure.<br>— Wiring or connection issue.<br>— Water injection pipe obstructed.<br>— Water flow control valve plugged or defective.<br>— Dual solenoid valve Y-1 obstructed or defective.<br>— No output to solenoid valve form relay board. |
| **E51** | No Water In Boiler | Water inside steam generator does not reach low water level | — Water supply is shut off.<br>— Low water pressure.<br>— Generator drain cap missing or loose.<br>— Generator drain pump is not sealing.<br>— Generator drain pump elbow leaking.<br>— Faulty or scaled water level probe.<br>— Faulty or plugged dual solenoid valve assembly.<br>— Wiring or connection issue.<br>— No output to dual solenoid from relay board. |
| **E53** | Fan Motor High Temperature | Fan motor too hot | — Exhaust hood is not operating properly.<br>— Check LED flashes on the Motor Control.<br>— **See Motor Control Error Code list**.<br>— Connection Issue on Hall Effect sensor.<br>— Fan wheel is not operating.<br>— Hall sensor does not detect motor rotation. |
| **E54** | Fan Motor 2 High Temperature | 20•20 lower fan motor too hot | — Exhaust hood is not operating properly.<br>— Check LED flashes on the Motor Control.<br>— **See Motor Control Error Code list**.<br>— Connection Issue on Hall Effect sensor.<br>— Fan wheel is not operating.<br>— Hall sensor does not detect motor rotation. |
| **E55** | Vent Not Open | Browning valve does not open | — Alignment issue between motor cam and vent motor safety switch (micro switch).<br>— Fault vent valve (motor).<br>— Fault vent valve safety switch (micro switch).<br>— Wiring or connection problem. |

CONTINUED ON NEXT PAGE

## ERROR CODES

| Error Code | Error Call Out in Display | Description of Error | Possible Cause |
|---|---|---|---|
| **E57** | No Rinse Water | During rinse no water flow is detected through solenoid valve | — Water supply is shut off.<br>— Low water pressure.<br>— Check wiring to all components mentioned below.<br>— Flow switch is dirty or defective.<br>— Dual water solenoid valve obstructed or faulty (Y3.)<br>— Relay board, high voltage, defective. |
| **E93** | Communication Error, FROM Display Board | Communication error between display board and low voltage relay board | — Check ribbon cable connections mentioned below.<br>— Ribbon cable defective.<br>— Relay board, low voltage, connector defective.<br>— Display board connector defective. |
| **E94** | Communication Error, TO Display Board | Communication error between display board and low voltage relay board | — Check ribbon cable connections mentioned below.<br>— Ribbon cable defective.<br>— Relay board, low voltage, connector defective.<br>— Display board connector defective. |
| **E98** | RB is in Cesius and DB is in Fahrenheit | Conflict of unit configuration in the setup menu | — Relay board and Data board do not match, use setup menu to change format. |
| **E99** | RB is in Fahrenheit and DB is in Cesius | Conflict of unit configuration in the setup menu | — Relay board and Data board do not match, use setup menu to change format. |
| **E100** | DB is not equal to RB version. Error generated by DB. | Software update may have failed. | — Check ribbon cable connections.<br>— Ribbon cable defective.<br>— Relay board, low voltage, connector defective.<br>— Display board connector defective.<br>— Software may need to be updated again. |
| **E101** | DB is not equal to RB version. Error generated by RB. | Software update may have failed. | — Check ribbon cable connections.<br>— Ribbon cable defective.<br>— Relay board, low voltage, connector defective.<br>— Display board connector defective.<br>— Software may need to be updated again. |

## CombiTouch MOTOR CONTROL ERROR CODES

| Type of Error | Indication | Release of Error |
|---|---|---|
| Undervoltage | LED flashing sequence, with 1 flash per period. | Voltage of intermediate circuit is less than 250V |
| Overvoltage | LED flashing sequence, with 2 flashes per period. | Voltage of intermediate circuit exceeds 445V |
| Excess Temperature | LED flashing sequence, with 3 flashes per period. | Temperature sensor in the power unit is more than 93°C |
| Overcurrent | LED flashing sequence, with 4 flashes per period. | Blocked motor, detected by current peak monitoring from 900 rpm rotating field |
| Overcurrent | LED flashing sequence, with 5 flashes per period. | Intermediate circuit current exceeds 4.0A |
| Short-circuit | LED flashing sequence, with 6 flashes per period. | Release of interrupt at intermediate circuit current larger than 53A |
| Power on | LED flashing sequence, with 7 flashes per period. | Effective mains voltage does not correspond to jumper setting 115V/230V |
| Watchdog | LED flashing sequence, with 8 flashes per period. | Watchdog of the microcontroller released, program crash |

## ERROR CODES

When the oven malfunctions, an error code will appear in the display.

**PRESS THE START ICON TO ACKNOWLEDGE THE ERROR.**

The icons that begin to flash represent operational modes that are still usable.
When the oven fault is corrected, the Combitherm will return to normal operation.

| Error Code | Display Shows | Model | | Mode | | | |
|---|---|---|---|---|---|---|---|
| | | ES | ESG ESI | Steam | Combination | Convection | Retherm |
| E01 | Low Water Boiler | Yes | No | No | No | To 365°F/185°C | No |
| E02 | Control Temp High | Yes | Yes | No | No | No | No |
| E03 | Fan Motor Error | Yes | Yes | No | No | No | No |
| E04 | Fan Motor 2 Error | Yes | Yes | No | No | No | No |
| E11 | Convection Temperature High | Yes | Yes | BOILER UNITS ONLY | No | No | No |
| E13 | Boiler Temperature High | Yes | No | No | No | Yes | No |
| E15 | Condenser Temperature High | Yes | Yes | No | No | To 356°F/180°C | No |
| E20 | B11 Core Temperature Probe Single Point Fault - HACCP only | Yes | Yes | No | No | No | No |
| E21 | N6 Cavity Probe Fault | Yes | Yes | BOILER UNITS ONLY | No | No | No |
| E22 | B10 Core Temp Probe Fault | Yes | Yes | BY TIME ONLY | BY TIME ONLY | BY TIME ONLY | BY TIME ONLY |
| E23 | B4 Boiler Probe Fault | Yes | No | No | No | No | No |
| E24 | B5 Bypass Probe Fault | Yes | Yes | No | No | Yes | No |
| E25 | B3 Condenser Probe Fault | Yes | Yes | Yes | No | To 356°F/180°C | No |
| E26 | N8 Boiler Safety Temperature Probe Fault | Yes | No | No | No | No | No |
| E27 | Boiler Element Temperature High | Yes | No | No | No | Yes | No |
| E34 | Steam Generator Drain Pump Fault | Yes | No | No | No | No | No |
| E36 | Steam Temperature High | Yes | No | No | No | Yes | No |
| E51 | No Water in Boiler | Yes | No | No | No | Yes | No |
| E53 | Fan Motor High Temperature | Yes | Yes | No | No | No | No |
| E54 | Fan Motor 2 High Temperature | Yes | Yes | No | No | No | No |
| E55 | Vent Not Open | Yes | Yes | Yes (NO BROWNING) | Yes (NO BROWNING) | Yes (NO BROWNING) | Yes (NO BROWNING) |
| E57 | No Rinse Water | Yes | Yes | Yes | Yes | Yes | Yes |
| E93 | Communication Error FROM Display Board | Yes | Yes | No | No | No | No |
| E94 | Communication Error TO Display Board | Yes | Yes | No | No | No | No |

# INSTALLATION

## COMBITOUCH® CHECKLIST

**Use this list as a final check of oven installation conformance.**
**Damage directly attributed to improper set up, installation, or cleaning can invalidate warranty claims.**

### CLEARANCES:

Left: 6″ (152mm) **RECOMMENDED SERVICE ACCESS OF 18″ (457mm).**
20″ (508mm) **FROM HEAT PRODUCING EQUIPMENT.**
Right: 4″ (102mm)
Back: 4″ (102mm) for plumbing
Top: 20″ (508mm) for air movement

**ARE ALL CLEARANCE REQUIREMENTS MET?** ❑ **YES** ❑ **NO**

**IF NO, EXPLAIN:** _____

_____

### WATER SUPPLY AND DRAINS:

Verify hook-up to ***TWO*** (2) separate ***cold*** water supply lines with a 3/4″ (19mm) water connection supply line. Verify inlet water pressure is at a minimum of 30 PSI (2.8 bar). Maximum water pressure is not to exceed 90 PSI (6 bar). Verify drain diameter of 1-1/2″ (41mm) with a positive descending slope, and with a 2″ (51mm) air gap which is free of obstructions before connection to the site drain. Verify 1/8″ (3,2mm) pitch to 10′ (305cm) of drain line.

**IMPORTANT: Alto-Shaam has listed Water Quality Requirements in the installation manual for this equipment. It is the responsibility of the end user to have the water connected to this appliance tested to ensure these standards are met before putting the oven into use. Failure to meet these standards will void the warranty if damage to the oven is found to be related to water quality.**

**ARE BOTH WATER SUPPLY LINES PROPERLY CONNECTED?** ❑ **YES** ❑ **NO**

**IF NO, EXPLAIN:**_____

**IS A FILTER SYSTEM INSTALLED ON THIS UNIT?** ❑ **YES** ❑ **NO**

**STORE HAS SEEN THIS RECOMMENDATION:**

❑ **YES** ❑ **NO**

**SIGNATURE OF STORE REPRESENTATIVE:**

_____

### ELECTRICAL CONNECTIONS:

Verify electrical power requirements for oven.

Verify voltage at terminal block.

Check all terminals for tightness.

**VOLTAGE:** _____

**PHASE:** _____

**BREAKER SIZE:** _____

LINE VOLTAGE AT TERMINAL BLOCK (TO GROUND):

➥ **LINE 1:** _____ **LINE 2:**_____ **LINE 3:** _____

**LINE VOLTAGE (PHASE TO PHASE):** **LINE 1 to 2:** _____

**LINE 2 to 3:** _____

**LINE 3 to 1:** _____

**ELECTRICAL SUPPLY LINE SIZE:** _____

**ALL ELECTRICAL TERMINALS TIGHT:** ❑ **YES** ❑ **NO**

### CONTROL BOARD CONNECTIONS & OPERATION:

With the Power ON, **press the Set-Up Key** to access software version, and record.

**SOFTWARE VERSION:**

**RB**_____ **DB**_____

**ALL BOARD CONNECTIONS TIGHT:** ❑ **YES** ❑ **NO**

**ALL FUNCTIONS ARE DISPLAYED:** ❑ **YES** ❑ **NO**

**ALL FUNCTIONS ON CONTROL OPERATE:** ❑ **YES** ❑ **NO**

**UNIT OPERATES IN ALL MODES:** ❑ **YES** ❑ **NO**

IF NO, EXPLAIN: _____

### PHYSICAL CONDITION: *REFERENCE INSTALLATION INSTRUCTIONS FOR COMPLETE INFORMATION ✔

Bottom of oven has been checked for damage due to improper positioning on site . . . . . ❑
Verify all gaskets, hoses, and carts* are in place and function properly . . . . . ❑
If oven includes a cart, verify proper installation of the rack guide on companion warmer or chiller* . . . . . ❑
Verify the installation of drip pans*, racks, shelves, drain screen, spray hose* . . . . . ❑
Verify the oven is level and installed on a solid, water resistant floor . . . . . ❑

| | |
|---|---|
| **SERVICE AGENCY:** | **START-UP DATE:** |
| | **INSTALLATION NAME:** |
| **MODEL NO.:** | **SERIAL NO.:** |
| **TECH SIGNATURE:** | **CUSTOMER SIGNATURE:** |

# ORIGINAL EQUIPMENT LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first. Alto-Shaam will bear normal labor charges performed by an authorized Alto-Shaam service agent during standard business hours, and excluding overtime, holiday rates or any additional fees.

The parts warranty remains in effect for one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

## THIS WARRANTY DOES NOT APPLY TO:

1. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
2. Equipment damage caused by accident, shipping, improper installation or alteration.
3. Steam generator or steam generating system damage as a result of inadequate routine maintenance and cleaning. Required maintenance and cleaning of steam generating equipment is the responsibility of the owner/operator.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions including, but not limited to, equipment subjected to harsh or inappropriate chemicals including, but not limited to, compounds containing chlorine, chlorides or quaternary salts, or equipment with missing or altered serial numbers.
5. Equipment that uses water must meet Alto-Shaam's minimum water quality standards as shown below. USE OF WATER NOT MEETING ALTO-SHAAM'S MINIMUM WATER QUALITY STANDARDS WILL VOID THIS WARRANTY.
   Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator. The installation and use of Alto-Shaam's CombiGuard™ Water Filtration System is highly recommended.

***ALTO-SHAAM COMBITHERM WATER QUALITY MINIMUM STANDARDS***

| CONTAMINANT | INLET WATER REQUIREMENTS (UNTREATED WATER) |
|---|---|
| Free Chlorine | Less than 0.1 ppm (mg\L) |
| Hardness | Less than 3 gpg (52 ppm) |
| Chloride | Less than 30 ppm (mg\L) |
| pH | 7.0 to 8.5 |
| Alkalinity | Less than 50 ppm (mg\L) |
| Silica | Less than 12 ppm (mg\L) |
| Total Dissolved Solids (tds) | Less than 60 ppm |

6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Oven Cleaner including, but not limited to, damage due to chlorine, bleach, quaternary salts, scouring powders or other harmful chemicals. Use of Alto-Shaam's Combitherm Cleaner on Combitherm ovens is highly recommended.
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or other consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ALTO-SHAAM BE LIABLE FOR LOSS OF USE, LOSS OF REVENUE OR PROFIT, OR LOSS OF PRODUCT, OR FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

Warranty effective November 1, 2011

# TRANSPORTATION DAMAGE AND CLAIMS

All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.

2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.

3. Note all damage to packages directly on the carrier's delivery receipt.

4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.

5. If the driver refuses to allow inspection, write the following on the delivery receipt:

   *Driver refuses to allow inspection of containers for visible damage.*

6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.

7. Save any packages and packing material for further inspection by the carrier.

8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

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RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE. ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: _____

Serial Number: _____

Date Installed: _____

Voltage: _____

Purchased From: _____

_____

_____

**Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through the use of Alto-Shaam's toll-free number. Emergency service access is available seven days a week including holidays.**

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